GARY MANGIACOPA ARCHIVE
==========
Title: B2F82I9
Slug: b2f82i9
Categories: Cryptozoology
Source: https://garymangiacopraarchive.com/b2f82i9
Pages: 14 scanned, 14 extracted
OCR: Google Vision API (document_text_detection)
Processed: 2026-06-06
==========

OUT-OF-PLACE COELACANTHS

Michel RAYNAL, 21 avenue Pierre Sémard, 11100 Narbonne (France)
Gary S. MANGIACOPRA, 7 Arlmont Street, Milford (Conn.) 06460 (USA)

Oceans, which cover more than 70 % of our planet, harbour many animal species still unknown to science, including fishes each year, several dozen fish species are described [1, 2], sometimes very large ones, as it has been demonstrated by the discovery of the megamouth shark (Megachasma pelagios) in 1976, only described 7 years later [3]. With regards to the fishes, however, one of the most spectacular discovery of the twentieth century is certainly that of the coelacanth.

THE FIRST COELACANTH

On December 22, 1938, off the coast of South Africa near the Chalumna river, captain Hendrick Goosen caught a very strange fish in the nets of his fishing trawler Nerine, from a depth of about 70 m (230 feet). There had been an "upwelling" of cold water and deep sea sharks had been also trawled at this occasion from this unusually shallow depth. The fish in question was still alive when it was captured. It was of a blue metallic colour, about 1.50 m (5 feet) long and weighed almost 60 Kg (130 pounds). Its most curious features were its trilobate tail and its pedonculated fins.

Miss Marjorie Courtenay-Latimer, a taxidermist at the East London Museum, naturalised the fish, but she could not identify it. She made a drawing, which she sent to professor J.L.B. Smith, an ichthyologist at the Cecil Rhodes University in Grahamstown: he recognized at a first glance that it was a fish belonging to the crossopterygians, and more precisely to the coelacanthiform order, supposed to have become extinct about 65 million years ago! Palaeontologists generally believe that crossopterygians gave birth to the first terrestrial tetrapods (four-footed vertebrates).

Subsequent studies of the East London specimen confirmed Smith's first impression, and he described this true "living fossil" in Nature in 1939, as Latimeria chalumnae, in the honour of miss Courtenay-Latimer and in reference to the place of the capture [4].

THE SEARCH FOR THE HABITAT OF LATIMERIA

Professor Smith then tried to collect a second specimen. He distributed thousands of leaflets, printed in English, French and Portuguese, with the photograph of the East London specimen, along the coasts of South Africa and Mozambique, with a reward of £100, for everybody who could provide a

[PAGE BREAK]

second specimen, dead or alive. This lead him to collect at least one witness' account from the Mozambique Channel (between Madagascar and Africa):

"In 1948 I met a native in the Bazaruto area of Mozambique who picked on the fish at

once. [...] In the water it was like a big Garrupa (rock cod), but when he got it out the big scales and the peculiar fins stamped it on his memory as unique. He spoke of its oiliness, the soft flesh, and the absence of bone, things about which he could never have known except from an actual specimen. He could not say if the tail was the same, but it was near enough." [5].

Smith came to the conclusion that the species was living off Comoros Islands, a (then French) volcanic archipelago in the Mozambique Channel, and that the first specimen was only a stray individual (as well as the Bazaruto one). One of his contacts in Comoros Islands, named Eric Hunt, tried to obtain a new coelacanth.

A second specimen was actually fished on December 20, 1952, off Anjouan Island of the Comoros archipelago and, thanks to Hunt's efforts, kept for scientific study. It was again described by J.L.B. Smith as Malania anjouanae, in doctor Malan's honor, the then Prime Minister of South Africa [6], but it turned out later to belong to the same species as the first specimen from East London.

Since 1952, about 200 specimens have been caught off Comoros Island, most of them between 100 and 300 meters (300 to 1000 feet) in depth: the habitat of the coelacanth has thus been predicted and discovered through a cryptozoological method, involving testimonial evidence.

Even more significant for cryptozoology, it appeared that this fish was well known to the native fishermen of the archipelago each year, they caught one or two of these fishes [6], which they called Mtsamboïdoï or more easily Kombessa. They not only used to eat this fish, but they even used its spiny scales to roughen their bicycle tires before sticking a piece of rubber [5] ! If it was a discovery for Western science, it was certainly not for Comoros fishermen...

Burchard Brentjes, a German zoologist who specialized in the history of zoology, has tried to demonstrate an early discovery of the coelacanth by Indian Moghols, from an artistic representation of the early eighteenth century, on an Indian miniature from Lucknow. It depicts a Muslem religious, Khodsha Khadir, standing on a large fish : as it represents about

[PAGE BREAK]

3/4 of the man's size, it should be about 4 feet (1.20 m) long, consistent with that of a coelacanth.

"This fish shows strange features, which are only found in Latimeria chalumnae, such as the four paired ventral fins and the pedunculated fin as the second back fin. The first back fin is somewhat shifted forward, in order to make some place for the Saint." [7]

Brentjes emphasized that Indian sailors had reached South Africa in the tenth century and had settlements in Mozambique. Indian Moghol emperors were fond of exotic animals, as demonstrated by another Indian miniature of 1625 showing a dodo from Mauritius Island (a big wingless bird, now extinct). It would thus be not so surprising that Indians became aware of the existence of the coelacanth from Comoros fishermen, or even from stray individuals in the Mozambique Channel.

Despite this brilliant demonstration, the coelacanth identification is not very convincing, as the tail does not seem to be trilobated, as far as one can judge from the photograph published in Brentjes' article.

AFRICAN COELACANTHS ?

Meanwhile, several reports of out-of-place coelacanths had been recorded

by J.L.B. Smith from the coast of South Africa itself, after the discovery of the first specimen. In his first article for Nature in 1939, which he began by Pliny's famous sentence ex Africa semper aliquid novi (from Africa comes always something new), Smith also wrote:

"A responsible citizen-angler of East London stated that about five years ago [ca. 1934] he had found precisely such a fish, only considerably larger (sic), partially decomposed, cast up by the waves on a lonely part of the shore east of East London. When he returned with assistance, the monster had vanished with a risen tide." [4].

In another article published in 1940, Smith repeated the former account, with the remark that the witness "described the specimen in such terms as to render it very likely that he was not mistaken", and he added the following one:

"Also, though probably less reliable than the above, is a statement emanating from some member of the crew of a fishing vessel, that one of them had seen no less than six such fishes taken in one haul near Durban. All had been discarded as unknown vermin." [8]

In an article written in 1954, professor Millot, a French specialist on the coelacanth, ruled out these two sightings :

"Such claims, impossible to be checked, have no scientific value and cannot be taken in account. It is well known that any discovery of an exceptional animal, making some ado, excites the imagination, orientates and deforms the memories and leads many people to believe quite sincerely they have already seen the animal in question." [9]

The later remark is true, but the previous one can be discussed: one would be wrong to rule out all the reports on the presence, be it accidental, of coelacanths off South Africa, as we are going to see that it is supported by hard evidence.

A second "wave" of reports appeared after the discovery of the second specimen in 1952:

"In 1956 J.L.B. Smith received a letter from Mr. Bert Spring, the lighthouse keeper at Cape St Blaize near Mossel Bay, who stated that he had seen a coelacanth swimming near the surface of the water." [10]

[PAGE BREAK]

Michael Bruton has even published a much more astounding story:

"Recently I had the privilege to visit the old boardroom of the famous shipping and timber company in Knysna, Thesens, courtesy of the well-known novelist, Hjalmar Thesen. He showed me a remarkable painting by his uncle, Leonard Thesen, which quite clearly depicts the coelacanth, resplendent in blue with white flecks, along with other common fishes from that area, such as leervis, kob and parrot fish. The painting was originally done on a piece of curtaining for a cottage purchased in 1924 but has since been framed and covered with glass. A label on the glass states that the painting dates from 1925, which would be extraordinary if it is true." [10]

Extraordinary indeed, because this painting was made 13 years before the discovery of the first specimen! And it confirms that the occurrence of the coelacanth in South African waters is not a rare event. In fact, a second stray specimen has been just recorded it was trawled at a depth of 40-45 m off Quelimane (Mozambique) in August 1991 [11, 12]. A study revealed that it did not differ genetically from the Comoros population, as it should had been the case if it had belonged to a distinct population.

There are also some vague reports on the possible occurrence of coelacanths on the coasts of Madagascar: while attending to a conference on the coelacanth in San Francisco in 1989, Michael N. Bruton heard from a

Japanese fellow that a coelacanth had just been recorded from the North-East shore of Madagascar [13]. The Zoological Record lists a bulgarian article of 1988 about the coelacanth off Madagascar [14], but we were unable to locate the Priroda magazine, published in Sofia, where it was published.
E. Guinea
Principe
Southern
Africa
A scales
witness accounts
confirmed specimen
Uganda
Congo
Kenya
Gabon
Zaire Rwanda
Burundi
Seychelles
Tanzania
Comoros
Angola
Malawi
Zambia
Mozambique
Mauritius
Zimbabwe
Madagasðar
Reunion
Namibia
Botswana
Swaziland
South Lesotho
Africa.

[PAGE BREAK]

SIGHTINGS FROM UNEXPECTED PLACES
When the second coelacanth was found off Comoros Islands, Pr. J.L.B. Smith received several more or less serious letters, including some about coelacanths recorded from unexpected, if not unlikely, places:
"People from many countries wrote to tell of coelacanths they had seen there. An American soldier stated that they were common in the fish-markets of Korea. A woman in Bermuda was positive one had been offered to her by a fisherman there." [5]
Smith did not comment these claims, but as they are quoted among several letters from more or less crazy people, it is clear that he did not believe that coelacanths were lurking in Northern Atlantic or Northern Pacific Oceans.
Another account came from a Mr Geoffrey Cartwright, a Salisbury businessman, who claimed to have seen the fish in November 1952 in shallow water, while diving off Malindi (northern Kenya). Following is an excerpt from his account, published in the September 1953 issue of The South African Angler:

"One day I had swum out with my harpoon gun. I looked down into the water and just below my sand-shoed foot I saw a large fish. It was heavily built and probably weighed from 100 to 150-lbs. I thought how just too comfortably my foot would fit into its mouth. It was totally unlike any other fish I had seen or saw afterwards. It looked wholly evil and a touthand years old.
"It had a large eye, and the most distinguishing feature was the armour-plated effect of its heavy scales scales so heavy that it was set quite apart from all other fish I saw. It had a baleful and ancient appearance and was a dull, dark grey." [5, 15].
Cartwright tried to shoot the fish with his gun; the harpoon struck it, but did not penetrate. Some people believed he had only seen a rock cod, but when Cartwright saw a photograph of the second coelacanth (caught one month later), he became convinced that he did see this fish off Malindi. The only difference was that Cartwright's fish was of a dull dirty grey, whereas the coelacanth is rather blueish.
Cartwright also related his observation in Rhodesian and English newspapers, in which he gave some additional details :
"I found myself staring into its baleful green eye. The creature looked so menacing and evil- and a million years old that I was thoroughly scared for the moment. It had cruel jaws set with fierced dagger-sharp teeth... It made no move to attack but continued to tread water with its strange fins almost like a malformed human hand. It weighed, I'm sure, about 150 lbs. and had thick, bluish grey scales like steel plating. The thing was like some denizen out of a marine nightmare." [10].
This sighting has not been taken seriously by most scientists, for rather obscure reasons, as can be seen from the following statement by South African ichthyologist Michael N. Bruton :
"Although J.L.B. Smith gave no credence to this record, as well as to another by a native fisherman at Bazaruto, subsequent research has revealed that it is very unlikely that a snorkel-diver would encounter a coelacanth in shallow water." [10]
In fact, J.L.B. Smith did give credence to both these records: we have already seen that Smith wrote that the Bazaruto native described several details "which he could never have known except from an actual specimen", and with regards to the fish sighted off Malindi, he was even more definitely convinced. In reply to Geoffrey Cartwright's letter to The South African Angler, he wrote:

[PAGE BREAK]

"There are not many fishes on the East Coast of Africa which attain the size of 100-lbs., and of those that do that are known to be in that area, there is not one which agrees with your description nearly as well as the Coelacanth.
"During the past six months [of 1953], among the enormous numbers of letters we have received from all over the world, have been some giving information about strange fishes which people consider may have been coelacanths, and indeed some them are most interesting. I should not be surprised if coelacanths are eventually discovered over a great area of the oceans." [15].
Smith also wrote that the fish observed by Cartwright could not be a rock cod, which has neither big eyes, nor big scales. In his book Old fourlegs (1956), Smith mentioned Cartwright's report, and he was more convinced than ever that the fish was a coelacanth:
"What did I think? Well, it was clear that if the Comores was the home of the coelacanth, Malindi was much nearer and much more easily accessible in every way than East London, which one coelacanth at least had actually reached. Bazaruto fell in between

these places, and Cartwright's experience at least lent colour to the Bazruto idea. Furthermore, from my wide knowledge of the fishes of the western Indian Ocean I could think of no species that fitted Cartwright's description as well as a coelacanth. Not one.' [5].

It should be stressed also that, in contradiction with a received idea, the coelacanth is not an abyssal fish. The first specimen was caught off East London, at a depth of about 40 fathoms (70 m) [4]. The Mozambique specimen of 1991 was trawled at only 40-45 m [11, 12]. That a wandering coelacanth could be observed in shallow waters is therefore not as unlikely as Michael Bruton believes.

Moreover, Geoffrey Cartwright, describing how the fish was swimming, said it used "its strange fins almost like a malformed human hand", that is to say the pedunculated fins. Most fishes move by using their caudal fin as a propellor, the other fins being only used for stabilization or direction. The coelacanth, on the other hand, moves slowly forward by using its lobed fins, the tail being used only for fast starts this kind of moving was unexpected even to coelacanth specialists, until it was observed in 1987 by German researcher Hans Fricke, off Comoros Islands, from a submarine [16]. How Geoffrey Cartwright could be aware of such a behaviour, if he did not actually see a living coelacanth?

A recent submarine expedition has demonstrated that it is rather unlikely that a distinct population of coelacanths is living off the coasts of South Africa, the habitat being quite different. But it is quite clear, however, and definitely established by two specimens kept, that stray individuals of the Comoros population (Latimeria chalumnae) sometimes venture as far south as off South Africa and as far north as off Kenya.

If a wandering coelacanth off Kenya or South Africa should not be a problem for open-minded zoologists, the presence of this fish off the coasts of Australia is likely not to be accepted so easily. Such a report, however, was published in 1980, in the Australian Fortean magazine Strange Phenomena [17].

Several witness' accounts of out-of-place coelacanths were recorded by Hans Fricke, a German coelacanth researcher of the Max Planck Institut für Verhalten Physiologie in Seewiesen (Germany), who was able to film the

[PAGE BREAK]

coelacanth in its Comoros habitat from a "pocket submarine". When his film was broadcasted on a German TV channel, a rare fish seller told him he had seen a photograph of a coelacanth in a portuguese magazine, he could not recall the name [18]. But this vague memory might be of a coelacanth off Mozambique, a portuguese colony up to 1975, from which we have a native record (Bazaruto Island) in 1948 and a recent capture off Quelimane in 1991 (see above).

Then, Fricke received two phone calls (from a South American chemist and from another person) about the presence of a coelacanth in a fish market of the Baleares Islands [18, 19]:

"A reader of our Geo report wrote to me that he had seen a coelacanth on the fish market of Palma de Mallorca. When I asked if there was a photographed, I received the surprising reply that he did not photograph the fish, as it was already known." [19].

A Greek fisherman also claimed to have caught such a fish, about 50 cm (almost 2 feet) long, and another specimen had been recorded on a fish

market in Vigo, Western Spain, but the photograph only shew the vague outlines of an anglerfish [19, 20].
Another account might refer to this file. It is a brief mention in the Fortean magazine Doubt of 1949, about the capture of strange small fishes with four legs, in California and Australia. The Australian specimen was identified as an anglerfish Antennarius striatus. Anglerfishes (Antennarius) indeed possess stumpy legs. The Californian "quadruped", sent by air express, was lost, but this incident shows that it was a small fish (sending a coelacanth by air express would have cost a fortune), possibly an Antennarius moluccensis. But the article also mentions a much longer specimen :
"A four-legged fish was caught near Tallahassee, Fla., January 18 [1949], FS. Described as 4 feet [1,20 m] long, with 3-inch [7,5 cm] legs. The Florida Wildlife Association could not identify it." [21].
It cannot be an anglerfish: the length (4 feet, 1.20 m) is quite consistent with the average length of a coelacanth, although the legs are rather short for this size. Could it be a lungfish Lepidosiren? But what this fresh water Amazonian fish would be doing off the coast of Florida ? And moreover, the Florida Wildlife Association would have identified it. On the other hand, a living coelacanth is not impossible at that time, it was known to rare scientists, from only one specimen.
English zoologist Karl P.N. Shuker recently wrote to one of us (M.R.) about a story even more extraordinary:
"I've been informed today [31 January] that a coelacanth has been discovered in Jamaican waters! I haven't seen anything on this in published form, but if it is true, it is a sensational discovery !" [22].
Certainly it is. So far, we have not been able to check such a sensational information.

[PAGE BREAK]

UNIDENTIFIED SCALES
Meanwhile, another coelacanth alert had come, strangely enough, from Florida. In 1949, ichthyologist Isaac Ginsburg, then of the U.S. National Museum in Washington, received a fish scale which he could not identify :
"This scale is like no other fish scale I have ever seen, Dr. Ginsburg said. It is not the scale of any of the several hundred known fish species of the Gulf of Mexico, he stated, and it is apparently of primitive structure.
"It is not impossible that this is the scale of coelacanth, Dr. Ginsburg said [...]." [23].
It should be remembered that at this time only the first specimen of the coelacanth, caught in 1938 off Chalumna river, was known. The origin of this scale is a story in itself. A woman from Tampa, Florida, used to buy fish scales from fishermen for making ornaments :
"One day in 1949, she bought a gallon of scales like none she had ever seen before, about one and a half inches [4 cm] in diameter, the size of tarpon scales but of a different structure entirely." [23].
This woman, as mysterious as the fish involved, sent one of the scales to Dr. Ginsburg, who wrote to her for more information, but his letter was never answered [23, 24].
We have written to the Smithsonian Institution in Washington, and to the Fish and Wildlife Service, where Dr. Ginsburg had worked, but the scale has been lost, and no photograph is known in existence unfortunately!
We had thus classified this file as a dead point, when recently enough we

received news about similar sounding stories. A friend of one of us (M.R.), French naturalist Roland Heu, found in 1992 in a shop in Biloxi (Mississippi) a gallon of unidentified scales. The dimensions of these oval scales are 4 to 5 cm long and 3 to 4 cm wide. Roland Heu describes them as follows:
"The part which would be visible in the living fish represents only the third of the length, so that the animal would be covered with a cuirass of three superposed layers of very hard scales of a peculiar ossified structure." [25].
3 to 4 cm
white, smooth
4 to 5 cm
16
brown, rough,
with ridges
The dimensions of the Biloxi scales are similar enough with that of the Tampa scale. There is a relation between the diameter of the scales and the length of the fish, about 50 times longer, thus giving a length of about 1.5 to 2.5 m to this fish.
Interestingly, professor Hureau, another French specialist of Latimeria at the Muséum National d'Histoire Naturelle in Paris, when examining these scales, said to Roland Heu: "should they come from Comoros, I would say they are coelacanth scales".
However, according to some [26], these scales come from a well-known large fish living in the Amazon river, Arapaima gigas (family Osteoglossidae, order Osteoglossiformes) is one of the largest freshwater fishes: it can reach

[PAGE BREAK]

a length of 3 m (10 ft) and a weight of 200 kg (about 440 lb). One of us (M.R.) was able to check that the "unidentified" scales actually belong to that fish [27]. But it seems difficult to believe that such a great ichthyologist as Isaac Ginsburg made the same misidentifcation.
A similar story of unidentified scales has been recorded in 1993 by J. Richard Greenwell, secretary of the International Society of Cryptozoology. American naturalist Sterling Lanier told him this story:
"About 20 years before [ca. 1973], when he was selling his well-known brass figurines of fossil animals at an outdoor art show near Florida's Gulf coast, another artist was displaying a necklace made of fish scales that "looked very much like those of Latimeria". He had extracted them from a pile of "trash" fish, crabs, and seaweed from a Gulf shrimp boat. "He had caught their glitter", recalls Lanier in his statement, "and picked them out, one by one.
"The owner let Lanier examine and sketch the scales, but he refused to sell the necklace. Unfortunately, Lanier, now retired in Sarasota, Florida, has lost the original notes and sketches, and all we have is his statement." [28].
J.L.B. Smith himself wrote about Latimeria scales, this time well identified, but the origin of which was a mystery, as they "surfaced" soon after the discovery of the first specimen of 1939:
"I received a letter from the Curator of a museum in Australia, who was shown some scales of the coelacanth by an Australian. We attempted to discover how he got them, but that mystery was never solved. Some others got in the possession of a scientist in Johannesburg, but we did not solve that either, for as far as could be determined from the time Miss Latimer took possession of the specimen, no unauthorised person was permitted to touch or even to approach it near enough to grab a few "souvenirs". I had given a special

warning about that souvenir danger. One "explanation" of possession of the scales was that they had been collected on the wharf at East London after Miss Latimer had gone off with the fish." [5].

This is quite possible, indeed, but it is also likely that other specimens were caught in South African waters, as it is suggested by the reports we have listed above.

But what about the Australian scale? Could it be related to the Australian coelacanth story reported by Strange Phenomena in 1980 ? At the very least, there is a tantalizing possibility that an unknown coelacanth is lurking off the coasts of Australia.

THE SILVER COELACANTHS

In 1966, Donald P. de Sylva published an article in Sea Frontiers, about a silver coelacanth photographed by Argentinean chemist doctor Ladislao Reti, in a church near Bilbao (on the Atlantic coast of Spain). It was used as an ex-voto hanging from the vault (marine ex-votos are generally paintings made in order to thank a Saint or the Virgin Maria for having escaped to a wreck). That a fish was used as a model for an ex-voto is strange, but it should be emphasized that the first Christians used the fish as a symbol for Jesus. This silver coelacanth was 4 inches (10 cm) long, and doctor Reti estimated it was about one century old [29, 30].

[PAGE BREAK]

De Sylva thus suggested that coelacanths might be living off Canaries, Azores or even in the Mediterranean Sea.

In 1965, a Belgian student in biology, Maurice Steinert, sent to professor Millot a photograph of a similar, but more beautiful, silver ornament, 36 cm (more than one foot) long. Jean Anthony described it as follows:

"[...] Mr Steinert's fish was undoubtedly a coelacanth. We had under our eyes, reproduced with fidelity, the main features of its external morphology: the famous opposition between the two back fins, a common-place one, the other one pedunculated; the resemblance between the long anal fin and the second back fin; the tail with three lobes; the attaching points of the paired fins, the roughness of the scales et even some details of the head." [31].

Maurice Steinert had bought this artefact in Toledo (Spain) to an antiquarian, who had delivered a certificate asserting it was more than eighty years old, and used as an ex-voto. In fact, according to some silver experts, these silver fishes might be two or even three centuries old [31, 32].

There may be a third silver coelacanth in existence, according to Dr. C. Carpine, the curator of the Oceanographic Museum in Monaco :

"About 30 years ago [thus ca. 1963], I was in the library of the Oceanographic Museum in Monaco, when a young man entered and asked to the present people if they believed he could sell to the Museum a model of an articulated silver fish. He showed us the object, which reached (more or less) one meter [3.3 feet] in length. I recognized at once a very well represented coelacanth." [33].

At that time, captain Jacques-Yves Cousteau was the director of this Museum; unfortunately, there was not enough money for this purchase. Dr. Carpine added he had some reasons to think that the man was Spanish (from his accent, we can suppose...).

More recently, Steven Kredel, one of Gary Mangiacopra's contacts, mentioned in a telephone conversation that he saw another silver artefact, a

goblet (drinking glass):
"The caption says it is Spanish of the 17th century (...). The fish engraved looks EXACTLY like Latimeria. It is in the Carnegie Museum of Natural History in Pittsburgh [Pennsylvania] and exhibited along with a coelacanth specimen in formaldehyde !" [34].
In fact, according to the authorities of the Carnegie Museum of Natural History, there is no coelacanth, either stuffed or sculptured, in their collections. Could Steven Kredel have seen them in another museum ?
The question is: how a Spanish artist could have been aware of the survival of the coelacanth decades (or even centuries) before its "official" discovery ?
It has been suggested by Thomson, a closed-minded ichthyologist, that these silver ornaments might be faked [35], but his remarks and his drawing from the Steinert silver coelacanth show that he did not look carefully at the photographs, not to speak of his errors, as he writes for instance that the Steinert silver coelacanth was found in a Paris antique shop!
The first (serious) reply which comes to mind is that it is an artistic representation made from a fossil coelacanth. According to Jean Anthony, a French specialist of Latimeria, that is quite unlikely, because it would suppose too perfect a knowledge in comparative anatomy and palaeontology

[PAGE BREAK]

(both sciences were even not yet born two centuries ago). Moreover, fossil remains of coelacanthiforms were, and still are, too uncomplete to allow such an accurate reconstruction. The only possibility is that the artist had a living or freshly caught coelacanth fish as a model this is confirmed by the fact that in the Steinert silver coelacanth, spots are visible on the skin, which indeed exist in Latimeria (a detail not remarked by Thomson, as I said above).
Donald P. de Sylva also suggested, though with the greatest reservations, that a stray specimen might have entered the Mediterranean Sea after the Suez Canal was opened in 1869, in order to explain the Reti silver coelacanth [29]. In fact, this is quite unlikely because of the differences of salt concentrations, the fish species which have managed to enter the Mediterranean from the Red Sea, are extremely rare. It would have been a miracle that one stray individual made such an odyssey (from Comoros Islands to Spain), was fished, kept, and used as a model by an artist. Moreover, we have seen that several silver artefacts are known, and that they were made long before the Suez Canal was built.
Another idea is that a Spanish boat visited Comoros Islands two or three centuries ago, that its crew saw a coelacanth just caught, that a drawing of the fish was made, which was then brought back to Spain, where an artist used it for its silver work. This hypothesis was more or less shared by J.L.B. Smith, who said to Shirley Bell in the South African magazine Field and Tide in 1967, when asked on the Reti silver coelacanth:
"If the silver coelacanth is genuine, as it could be, then it could easily have arisen from someone who had voyaged in early times to the east and seen the fish at the Comores [...].
"Eastern races are famous for their skill and silversmiths. All along East Africa they have plied this art for centuries, and the model could have been made by one of these men in that area. The Portuguese were the first white voyagers in those parts, and odd Spaniards often went with them. One of them might well have acquired this model and taken it to

Europe. At any rate I firmly believe that some of these early voyagers had at least seen a coelacanth. I think this very much more likely than that the ornament was based on a specimen from the Mediterranean." [36, 37].
This is quite possible, indeed, but with many "if". In addition, as two (or three) Spanish silver coelacanths are known to exist, there seems to be a peculiar Spanish tradition about this fish.
This leads us to the last possibility: a population of coelacanths, still unknown to science, might be living off a Spanish territory. After all, the Comoros population remained unknown to Western science till as late as 1952. Given the morphology of the coelacanth, and what is known of its biotope, one would expect a habitat more or less similar with the Comoros, that is to say a rough, volcanic and tropical archipelago, with depths of 100 to 400 m: Canaries, or Bermudas (once Spanish) would be good candidates, which reminds us of the letter sent to J.L.B. Smith, about coelacanth in Bermudas (see above).
A close examination of the Steinert silver coelacanth (the best made of both) reveals however some differences with Latimeria chalumnae: the head is definitely different, and the epicaudal lobe of the tail (the third, central lobe) is much less marked than in Latimeria. If these differences are not and it does not seem so, as all other details are
artistic liberties
represented with accuracy - they would indicate that the silver ex-voto

[PAGE BREAK]

depicts not only a
coelacanthiform.
new population, but also a
new species of
In order to know more on these silver fishes, it has been suggested to study them with a metallographical microscope: this examination might provide information on the technics of metal work used, hence on the antiquity of the object. It has been also suggested to do physics and chemistry analyses, which could allow us to discover the geographical origin of the silver ore, hence of the possible origin of the model. According to several Spanish silver experts contacted by German coelacanth researcher Hans Fricke and by Raphaël Plante, the ex-votos were made in Mexico in late seventeenth century [32].
The Mexican origin of the 2 (or 3 ?) silver ex-votos is consistent with that of the silver goblet from Pittsburgh. It should be emphasized that the Ginzburg's mystery scale came from Tampa, on the west coast of Florida, whereas Lanier's mystery scales were seen "at an outdoor art show near Florida's Gulf coast". Moreover, all the other silver fishes proposed by the Spanish antiquarian to Maurice Steinert in 1964 represented species living in the Gulf of Mexico.
From all the available data, not to mention the unconfirmed specimen from Jamaican waters, it is thus very likely that an unknown species of coelacanthiform fish awaits discovery in the depths of the Gulf of Mexico.
A scales
Mexico
■ silver fish

O alleged specimen
Central
America
Biloxi Tallahasse
A
Florida
Tazza
Belize
Jamaica
Guatemala Honduras,
El Salvador
Nicaragua
Panama
Costa Rica

[PAGE BREAK]

13
ACKNOWLEDGEMENTS
Many thanks to Jean-Jacques Barloy (Paris, France), Burchard Brentjes (retired zoologist, Berlin, Germany), C. Carpine (Musée Océanographique, Principauté de Monaco), Hans Fricke (Max Planck Institut für Verhalten Physiologie, Seewiesen, Germany), Roland Heu (Paris, France), Raphaël Plante (Station Marine d'Endoume, Marseille, France), Karl P.N. Shuker (West Bromwich, England) and Maurice Steinert (Bruxelles, Belgique).
REFERENCES CITED
1 - Tim M. Berra and Rita M. Berra, 'A temporal and geographical analysis of new [AD] teleost names proposed at 25 years intervals from 1869-1970', Copeia, n° 4, 25 November 1977, pp. 640-647.
2 Bernard Heuvelmans, 'How many animal species remain to be discovered?' Cryptozoology, 2, 1983, pp. 1-24.
A new
R.L. Taylor, L.J.V. Compagno and P.J. Struhsaker, 'Megamouth
species, genus and family of lamnoid shark (Megachasma pelagios, family Megachasmidae) from the Hawaiian Islands', Proceedings of the California Academy of Sciences, 43 [n° 8], 1983, pp. 87-110.
J.L.B. Smith, 'A living fish of mesozoic time', Nature, 143 [n° 3620], 18 March 1939, pp. 455-456.
5 J.L.B. Smith, Old Fourlegs, the Story of the Coelacanth. London, Longmans, Green and Company, 1956.
6 J.L.B. Smith, 'The second coelacanth', Nature, 171 [n° 4342], 17 January 1953, pp. 99-100.
7 - Burchard Brentjes, 'Eine Vor-Entdeckung des Quastenflossers in Indien ?', Naturwissenschaftliche Rundschau, 25 [n° 8], 1972, pp. 312-313.
8 J.L.B. Smith, 'A surviving fish of the order Actinistia', Transactions of the Royal Society of South Africa, 27, 1940, pp. 47-50.
9 J. Millot, 'Le troisième coelacanthe', Le Naturaliste Malgache, 1954, pp. 1-12.
Michael N. Bruton, 'Does the coelacanth occur in the Eastern Cape ?', The Naturalist, 33 [n° 3], November 1989, pp. 5-13.
10
11
Michael N. Bruton, A.J.P. Cabral and Hans Fricke, 'First capture of a

coelacanth, Latimeria chalumnae (Pisces, Latimeriidae), off Mozambique'. South African Journal of Science, 88 [n° 4], April 1992, pp. 225-227.
12
U. Schlieven, H. Fricke, M. Scharti, J.T. Epplen and S. Pääbo, 'Which home for the coelacanth ?', Nature, 363 [n° 6428], 03 June 1993, p. 405.
13
Michael N. Bruton, 'Is there a Madagascar coelacanth ?' Ichthos, n° 23, July 1989, p. 25.
14 Anonymous, 'Fish belonging to the genus Latimeria' [in bulgarian], Priroda (Sofia), n° 2, 1988, p. 110.
15 J.L.B. Smith, 'A coelacanth in Kenya waters ?', South African Angler, 8, September 1953, pp. 8, 19.
16 Hans Fricke, Hans, Olaf Reinicke, Heribert Hofer and Werner Nachtigall, 'Locomotion of the coelacanth Latimeria chalumnae in its natural environment', Nature, 329 [n° 6137], 24 September 1987, pp. 331-333.
17 - Anonymous, Strange Phenomena, 5 [n° 1], 1980, p. 12.

[PAGE BREAK]

14
18 - Hans Fricke, 'J'ai rencontré le fossile vivant'. Géo, n° 116, octobre 1988, pp. 56-75.
20 - Hans Fricke, 'Quastie im Baskenland ?' Tauchen, n° 10, Oktober 1989, pp. 64-67.
21 Anonymous, 'Fortean loss', Doubt, n° 27, 1949.
22 - Karl P.N. Shuker, Private communication (letter to M.R., 31 January 1995).
23 Anonymous, 'Capture "living fossil" fish', Science News Letter, 63 [n° 3], 17 January 1953, p. 38.
24
25
Willy Ley, Exotic zoology. New York, Viking Press, 1959, p. 429..
Anonymous, 'Des coelacanthes dans le golfe du Mexique ?' Science et Vie, n° 911, août 1993, pp. 17-18.
26 Anonymous, 'Pas de coelacanthes dans le golfe du Mexique !' Science et Vie, n° 913, octobre 1993, p. 6.
27 K.H. Lüling, 'Zur Biologie und Ökologie von Arapaima gigas (Pisces, Osteoglossidae)', Zeitschrift für Morphologie und Ökologie der Tiere, 54, 1964, pp. 436-530.
28 J. Richard Greenwell, 'Prehistoric fishing'. BBC Wildlife, 12 [n° 3], March 1994, p. 33.
29 Donald P. de Sylva, 'Mystery of the silver coelacanth', Sea Frontiers, 12 [n° 3], May-June 1966: 172-175.
30 - Michael N. Bruton, 'The silver coelacanth', Ichthos, n° 8, March 1985, p. 16.
31 Jean Anthony, Opération Coelacanthe. Paris, Arthaud, 1976, pp. 122-125, 165-167.
32 Patrick Mouton, 'A la découverte des derniers coelacanthes', Le Monde de la Mer, n° 49, mars-avril 1990, pp. 32-39.
33
C. Carpine, private communication (letter to M.R., 03 October 1993).
34 Gary S. Mangiacopra, private communications (letters to M.R., 25 May and 20 June 1994).
35

Keith Stewart Thomson, Living fossil
The story of the coelacanth. New
York, London, W.W. Norton and Co, 1991, pp. 134-152.
36 - Shirley Bell, 'Coelacanths a century ago?' Field and Tide, 9, January 1967, pp. 8-11.
37 Shirley Bell, Old man coelacanth. Johannesburg, Voortrekkerpers, 1969, pp. 139-140.